



Report of Director of City Development

Executive Board

Date: 16 July 2008

Subject: Completion of West Garforth Integrated Urban Drainage pilot project

Electoral Wards Affected:

Ward Members consulted
(referred to in report)

Specific Implications For:

Equality and Diversity

Community Cohesion

Narrowing the Gap

Eligible for Call In

Not Eligible for Call In

(Details contained in the report)

Executive Summary

This report describes the DEFRA-sponsored West Garforth Integrated Urban Drainage pilot project, which has just been completed by a partnership involving the Council, the Environment Agency, Yorkshire Water, the Pennine Water Group, and Bradford MDC. It explains the recommendations and action plan included in the project report, in the context of the existing work and priorities of the Council.

West Garforth has a long history of serious flooding problems. Many of these arise from the inadequate capacity and poor condition of private culverted watercourses in multiple ownership. No agency seemed to be responsible for finding a solution. The main aim of the West Garforth project was to see whether closer collaboration between agencies could identify innovative and feasible solutions, despite perceived regulatory difficulties.

It has been found that, although collaboration has enabled a thorough investigation of the problems to take place, using shared information, it has failed to overcome the regulatory barrier to shared solutions.

Nevertheless, the report shows that, as soon as serious resources are made available for *investigating* flooding problems and *inspecting* the condition of culverted watercourses, then opportunities for relatively modest actions become apparent that can have a significant beneficial impact.

The recommendations and action plan included in the project report are consistent with the Council's own Flood Action Plan.

1.0 Purpose of this Report

- 1.1 This report describes the West Garforth Integrated Urban Drainage pilot project, which has just been completed. It explains the recommendations and action plan included in the report, in the context of the existing work and priorities of the Council. The full DEFRA report (52 pages) can be obtained from Governance Services and should be available on the DEFRA website from the end of June.

2.0 Background Information

- 2.1 The West Garforth Drainage Area has a long history of flooding problems, going back to the 1980s and earlier. Many properties were flooded internally in June 2007, during the project period. The problems in this area are typical of those faced in many urban areas. The backbone of the drainage system consists of a series of inadequate culverted watercourses. These culverts – receiving flows from surface water sewers, highway drains and overland run-off – pass through hundreds of private properties.
- 2.2 In the early 1990s – as the sewerage agent of Yorkshire Water Services (YWS) – Leeds City Council designed a trunk surface water sewer scheme to replace the inadequate culvert. This was later shelved by YWS on the basis of a re-appraisal of responsibilities of the sewerage undertaker.
- 2.3 The ‘riparian’ owners of the culverts have no duty to resolve the capacity issues nor the ability to address maintenance issues. No-one has a statutory duty to inspect or keep records of the culverts. It is clear that any improvements will have to be based on an integrated approach, which manages to build upon the interests and responsibilities of all stakeholders – including local residents, Leeds City Council, Yorkshire Water Services and the Environment Agency - notwithstanding the regulatory or legal obstacles.
- 2.4 The Integrated Urban Drainage (IUD) pilot projects stem from the Government ‘Making Space for Water’ strategy, published in 2004, which highlighted the need for a more integrated approach to urban drainage. In response the Department for Environment, Food and Rural affairs (DEFRA) funded a series of 15 ‘Integrated Urban Drainage Pilot Projects’ with the aim of examining if and how integrated approaches to the management of urban drainage could provide a better means of addressing drainage problems. In West Yorkshire there were two pilot projects: the River Aire Strategic Studies project and the West Garforth project. Both projects – commencing on 15th November 2006 - were carried out by a partnership involving Leeds City Council, Bradford Metropolitan District Council, Yorkshire Water, the Environment Agency and the Pennine Water Group (Bradford and Sheffield Universities). The West Garforth one was managed by Leeds CC and the River Aire one by Bradford MDC. The projects were completed in mid-April 2008.

3.0 Main Issues

Overview

- 3.1 The fundamental aim of the West Garforth project was to see whether closer collaboration between agencies could identify innovative and feasible solutions, despite perceived regulatory difficulties.
- 3.2 Shared record data, along with supplementary surveys, were used to build a computer model of the surface water drainage. The model was verified by use of observational data from a new short-term flow survey, along with historical data. Engagement with the residents by means of newsletters and two public meetings

also produced a wealth of incident data as well as proposals for remedial measures.

- 3.3 The report shows that, as soon as serious resources are made available for investigating flooding problems and inspecting the condition of culverted watercourses, then opportunities for relatively modest actions become apparent that can have a significant beneficial impact. The simple task of carrying out CCTV survey, for example, necessitated silt and obstruction removal that will have made a real difference. Excavation to construct new manholes for survey access revealed constricted pipe junctions that have now been removed. Investigation of sewer connectivity, for modelling purposes, enabled the explanation and resolution of some long-standing, sewer flooding problems (due to blockage).
- 3.4 A significant number of the blockages in culverts and highway drains were caused by services severing them. This is probably a result of the absence of any statutory record of culverts and highway drains that undertakers must consult.
- 3.5 Data sharing between the partners has been largely successful, but a number of issues need to be resolved in order to facilitate the degree of record sharing that will be necessary in order to make the development of genuinely holistic Surface Water Management Plans viable.
- 3.6 The report describes a number of technically feasible options for reducing flood frequencies, but highlights a number of significant regulatory barriers that are preventing key partners from fully engaging with the promotion of solutions to the flooding problems.
- 3.7 Recommendations for the future of urban drainage systems have been made, based on the practical findings made in this study. Many of these coincide with the recommendations of the Pitt Report on the Summer 2007 floods
- 3.8 An action plan is proposed, based on the lessons learned in this project, with a view to securing positive actions by all stakeholders that will reduce flood risk.

Project Recommendations

- 3.9 The recommendations (part 4c of the report) cover the general regulatory context of flood risk management, and issues in relation to planning, inspection, maintenance, record keeping, insurance, data-sharing between agencies, and public engagement. Many of the recommendations are for national action. Of those with an implication for the Council most of them are already embodied in the Council's 'Flood Action Plan', which was developed by the Water Asset Management Working Group and endorsed by LMT in June/July 2005 (an updated version being approved by the Executive Board on 14 November 2007).
- 3.10 *Recommendation 2* calls for collaborative technical investigation of flooding incidents by the various agencies. This is already underway in Leeds and the first steps have been taken by the Director of City Development to convene a formal Flood Risk Management Partnership.
- 3.11 *Recommendations 4, 5, and 6* call for the local planning authority to seek opportunities to reduce the storm run-off from new developments. This is in line with the implementation of the Strategic Flood Risk Assessment for Leeds and the 'Minimum Development Control Standards for Flood Risk' guidance currently given to developers in the city. The removal of new drives, etc from the 'permitted development' category (Recommendation 5), is aimed at Government and coincides with the promise in the current 'Future Water' consultation that "*the Government will change householders' permitted development rights to allow them*

to pave over their front garden without planning permission only if the surface is porous, such as by using permeable paving or gravel". The building of green pathways (for surface flood flows) into new development (Recommendation 6), is an objective that is at the core of the Drainage Masterplan specification that has been developed for the EASEL project.

- 3.12 *Recommendations 10 and 11* call for properly financed inspection regimes – along with risk-based maintenance – to be established for all essential drainage assets. This is primarily aimed at national policy-makers, but it is worth pointing out that Leeds City Council has gone a long way towards implementing this for its own watercourses (now centralized under Land Drainage) and has a prioritised programme of inspection for other ordinary watercourses.
- 3.13 *Recommendation 13* calls for all stakeholders to make greater efforts to inform householders of flood protection and resilience measures that are available. The Council has recently completed a flood protection pilot project on the Dunhills estate in East Leeds for precisely that purpose. Consideration does need to be given to ways and means of spreading the lessons learned from this.
- 3.14 *Recommendations 18 and 19* call for the agencies to continue to engage with each other and the public on flooding issues to ensure that local knowledge and expertise is shared. This is something that we already aspire to and are making a start on formalizing (see 3.10 above).

Action Plan

- 3.15 Although the pilot project was essentially a study, part of its purpose was to identify what responses or solutions to the flooding problems might be available under the current regulatory framework. To this end an 'action plan' is included in the final report suggesting a series of actions that could lead to a reduction in flood risk. The report includes a prominent 'disclaimer' to make it clear that the *"report is the outcome of a research project and should not be taken to represent the official policy of the partner organisations. The recommendations and action plan should not be taken as a commitment to carry out construction works or to expend resources on any other measures."*
- 3.16 The actions listed for Leeds City Council are as follows:
- 3.17 ***(a) Seek opportunities for promoting some of the identified measures in Appendix F and explore the possible mechanisms for co-funding from other partners and local sources.*** Appendix F includes a range of uncosted options – some minor and some major – for alleviating the flood risk at different locations within West Garforth. Most of these would be capital schemes that would be capable of implementation using the Council's permissive powers under the Land Drainage Act, 1991, (s.14) and could maybe attract part-funding from the Environment Agency ('Grant in Aid' or 'Local Levy'). The Council, however, does not have a duty to implement such works and these would have to be weighed against other priorities – including other flood relief schemes. Nevertheless, some of the minor works in Appendix F have already been carried out as the findings of the pilot project became evident.
- 3.18 ***(b) Press forward with improvement of the highway drainage system in Ninelands Lane.*** The Highway Maintenance Division has already commenced design work for this and funding has been identified.

- 3.19 ***(c) Ensure that PPS25 is vigorously implemented in relation to new developments and that developers make contributions to drainage improvements where appropriate.*** The implementation of PPS25 (Development and Flood Risk) is mandatory and Annex G of this planning policy statement says that “in certain circumstances, to meet the wider aims of sustainable development, it may be necessary to permit development that requires the provision of flood risk management, including defence and mitigation works. Such provision will generally be funded by the developer”. In West Garforth, the developable land is almost entirely upstream of inadequate culverts with attendant flooding problems. In some cases – in particular where additional run-off cannot be controlled on-site - it will be preferable to ask the developer to fund downstream improvements, rather than to refuse planning permission.
- 3.20 ***(d) Continue to implement the new policy of risk-based CCTV inspection of culverted ordinary watercourses, with a view to ensuring that action is taken to remove any fresh impediments to flow.*** This is entirely in accordance with the recent Flood Action Plan of the Council. In the first year of operation after implementation of the plan, the Land Drainage Section carried out CCTV inspection and desilting of 11,600 metres of culvert (public and private) at a cost of about £143,000. During the course of the present pilot study, virtually all the West Garforth culverts were CCTV surveyed at a cost of £5,279 (part funded by DEFRA, part from the Land Drainage budget). The existing role of the Land Drainage Section includes taking action to ensure that blockages are removed from culverts. This action plan item does not imply any additional effort – simply a continuation of the good work already in progress.
- 3.21 ***(e) Continue to engage meaningfully with the community at regular intervals to develop community capacity to cope with future flood risks.*** This is building on the good practice in stakeholder engagement that was established during the pilot project, when two public meetings were held and a newsletter and questionnaires were issued. It is also in line with Action No. 24 in the Council’s own Flood Action Plan, which (under the heading ‘Community Support’) calls for “targeted flood fairs and public information campaigns for at-risk households on responsibilities of riparian ownership and flood protection products available” and “leaflets on what to do before and after floods”. A start on this campaign has been made as part of the Dunhills Flood Protection pilot project, which was completed in February.

4.0 Implications for Council Policy and Governance

4.1 None.

5.0 Legal and Resource Implications

5.1 None at present. Action plan item (a) – see para. 3.17 above - does not include a commitment to carry out any more construction work than has already been implemented. If the Council chose to use its permissive powers (under the Land Drainage Act, 1991, s.14) to carry out some of the optional works in Appendix F, these would require an injection into the capital programme and would be the subject of a separate report. It should be noted, however, that the completion of the West Garforth pilot project and the inclusion of potential solutions in the report, could lead to pressure on the Council to do this. This possibility was identified in the report of 3 July 2006 seeking approval to participate in the DEFRA integrated urban drainage pilot study programme.

6.0 Conclusions

- 6.1 The main aim of the West Garforth project was to see whether closer collaboration between agencies could identify innovative and feasible solutions, despite perceived regulatory difficulties. It has been found that, although collaboration has enabled a thorough investigation of the problems to take place, using shared information, it has failed to overcome the regulatory barrier to shared solutions. The recommendations of the Pitt Commission's review of the Summer 2007 flooding, if accepted by the Government, could lead to a redefinition of flood risk management responsibilities that might change the position substantially.
- 6.2 Nevertheless, the report shows that, as soon as serious resources are made available for investigating flooding problems and inspecting the condition of culverted watercourses, then opportunities for relatively modest actions become apparent that can have a significant beneficial impact.

7.0 Recommendations

- 7.1 That the final report to DEFRA on the West Garforth IUD pilot project be noted.
- 7.2 That the recommendations for local action (paras. 3.10-3.14 above) are endorsed.
- 7.3 That the Action Plan items for Leeds City Council (paras. 3.17-3.21 above) are endorsed.

Related Documents:

West Garforth Integrated Urban Drainage Pilot Study – Final Report (version 1.9)